

**REMARKS/ARGUMENTS**

Claims 8-17 are pending in the present application. Claims 8, 12, 14, and 15 have been amended. The amendments do not add new matter and find support throughout the specification and figures. Claim 1 stands rejected under 35 U.S.C. § 112, 1<sup>st</sup> paragraph. Given that claim 1 is no longer pending and that the rejection appears to relate to the elements of claim 8, Applicants address this rejection as being a rejection of claim 8. Claims 8-17 stand rejected under 35 U.S.C. § 102(b). It is respectfully submitted that all of the presently pending claims are allowable for at least the following reasons.

**35 U.S.C. § 112, 1<sup>st</sup> ¶**

Claim 1 stands rejected under 35 U.S.C. § 112, 1<sup>st</sup> paragraph, as being indefinite for failing to particular point out and distinctly claim the subject matter which applicant regards as the invention. Given that claim 1 is no longer pending and that the rejection appears to relate to elements of claim 8, Applicants address this rejection as being a rejection of claim 8.

Applicants have amended claims 8, 12, 14, and 15 to change "storage device" to "intelligent storage device," to be consistent with the preamble of claim 8, and to clarify the subject matter recited. An intelligent storage device is not only simply a memory, but rather also has its own "intelligence". In addition, one may also see from claim 8 that signals are transmitted to the "intelligent storage device", are evaluated by it, and are generated by the "intelligent storage device". The storage device of claim 8 differs from a usual storage device in that an "intelligent storage device" is recited. An example embodiment of an intelligent storage device is provided throughout the specification and figures. In one embodiment described in the specification, an intelligent storage device may perform a mutual dynamic authenticity test using a constantly changing data word, and process and acknowledge debit posting information. (Specification; page 1, ll. 2-13). Therefore, it is respectfully submitted that claim 8 is definite and it is respectfully requested that the rejection be withdrawn.

With respect to the assertion that "the debit information computer" has a vague meaning, this term does not appear in claim 8 (and as noted above, claim 1 has been canceled), and therefore this rejection is not understood. It is respectfully requested that the Examiner either explain the basis of this rejection or withdraw the rejection.

**35 U.S.C. § 102(b)**

Claims 8-17 stand rejected under 35 U.S.C. § 102(b) as being unpatentable over United States Patent No. 5,485,520 to Chaum et al. (the Chaum reference). Applicants respectfully submit that claims 8-17 are not anticipated by the Chaum reference, for at least the following reasons.

To reject a claim under 35 U.S.C. § 102, the Office must demonstrate that **each and every claim limitation is identically disclosed** in a single prior art reference. (See Scripps Clinic & Research Foundation v. Genentech, Inc., 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). "The identical invention must be shown in as complete detail as is contained in the claim." M.P.E.P. § 2131. Applicants respectfully submit that the Chaum reference does not disclose each and every element of the claimed invention.

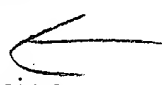
The present invention relates to performing a posting to a mobile integrated circuit card, with the help of a terminal which has a secure wireless communication with a computer. (Specification, page 1, ll. 1-4). Referring to Fig. 1, in one example embodiment, a roadside computer station 1 communicates with a moving vehicle 3 via a radio beacon 2. (Specification, page 6, ll. 7-8). The moving vehicle 3 is equipt with an on-board terminal OBU whose fee credit is stored on an integrated circuit card ICC. (Specification, page 6, ll. 9-11). When driving through a particular communication range, the road toll is to be deducted from the credit on IC card ICC, i.e., posted to the credit account of IC card ICC. (Specification, page 6, ll. 13-16).

In the example embodiment, the communication sequence between the various devices is as follows. An initiation signal is transmitted via radio beacon 2. (Specification, page 6, ll. 18-19). In response thereto, the terminal OBU generates a service request signal. (Specification, page 6, ll. 18-20). The radio beacon 2 then generates a debit order signal which is received by terminal OBU, and then transmitted by terminal OBU to IC card ICC as a debit command. (Specification, page 6, ll. 20-22). After the debit posting has been performed, the IC card ICC generates a receipt acknowledgment signal, which is transmitted from terminal OBU to radio beacon 2 on the basis of an initiation signal of radio beacon 2. (Specification, page 6, ll. 22-25). Proper receipt of the acknowledgment signal is then confirmed (acknowledged) by radio beacon 2, whereupon terminal OBU transmits the acknowledgment signal to the IC card to complete a transaction record, and the IC card ICC


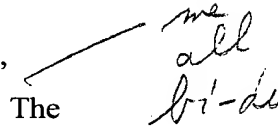
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makes the information available for the next service request by terminal OBU.

(Specification, page 6, ll. 26-31).

The time-critical part of the communication sequence is from the creation of the debit order by the radio beacon 2 until transmission of the <sup>is confirm</sup> acknowledgment signal to terminal OBU. (Specification, page 6, ll. 33-35). This communication, which is susceptible to interference, is executed within an extremely short period of time according to the present invention, due to the fact that a MACRO signal is relayed from terminal OBU to IC card ICC according to Figure 2. (Specification, page 6, line 37 - page 7, line 4). The MACRO signal contains a selection signal for application APPL (posting), a posting triggering signal CMD, posting amount B, its own signature S1 and a randomly generated number R2.  (Specification, page 7, ll. 4-7). Furthermore, the MACRO signal may also contain a provisional transaction data record L for creating log book information in IC card ICC. (Specification, page 7, ll. 7-9). Transaction data record L and posting amount B together form a posting data record. (Specification, page 7, ll. 10-11).

Claim 8 recites a particular exchange of information between the terminal and the intelligent storage device, and a particular use of the exchanged information. Before an interrupt-sensitive time period, a first data word (e.g., R1) is transmitted from the intelligent storage device (e.g., ICC) to the terminal (e.g., OBU). During the interrupt-sensitive time period, a signal is transmitted from the terminal to the intelligent storage device which includes not only an identifier (e.g., S1) generated as a function of the first data word (e.g., R1), but also a posting trigger signal (e.g., CMD), a posting data record (e.g., L, B), and a second data word (e.g., R2) which is generated by either the computer or the terminal. The intelligent storage device checks the identifier (e.g., S1), posts the data record (e.g., L, B) and generates a further identifier (e.g., S2) using the second data word (e.g., R2). A confirmation signal and the further identifier (e.g., S2) are then transmitted by the intelligent storage device (e.g., ICC) to the terminal (e.g., OBU).

 Claim 8 includes the element of, during the interrupt-sensitive time period,  transmitting a particular signal from the terminal to the intelligent storage device. The particular signal according to claim 8 includes a <sup>dr</sup> posting triggering signal, a posting data record, an identifier <sup>protocol</sup> generated using the first data word and a second data word of the at least one data word generated by one of the computer and the terminal.

The Office Action cites various sections of the Chaum reference as disclosing this element, however none of the cited sections disclose a particular signal including all of the listed elements being transmitted from a terminal to an intelligent storage device. The Chaum reference apparently discloses only one transmission to a smart card, pursuant to figure 5 of the Chaum reference. The content of the transmission shown in figure 5 is apparently limited to "Digits 0( ); Charge Station ID; Time." Pursuant to the Chaum reference, apparently digits 0[ ] represents "the amount of the computed toll charges, the charge station identity, the time of the transaction, etc." (Chaum; col. 16, ll. 47-49). None of these elements may be considered an identifier which is generated using a first data word. In particular, the amount of the computed toll charge is not unique to the transaction, as all vehicles of the same type are charged the same amount. The charge station identity does not change from transaction to transaction, and therefore also does not serve the function of an identifier. Finally, the time is not useful for performing an authenticity test since a third party to the transaction can easily determine the time and therefore disrupt the transaction.

Furthermore, even if time was able to be used as the identifier, which is respectfully not conceded, according to claim 8 the identifier is generated using a first data word. The first data word is for performing a mutual dynamic authenticity test between the computer, the terminal and the intelligent storage device and is transmitted, before the interrupt-sensitive period, from the storage device to the terminal. The time signal apparently transmitted in the Chaum reference to the smart card therefore cannot disclose, or even suggest, the identifier of the present application since it is not generated from a data word that is generated in the smart card. Therefore, the Chaum reference does not disclose, or even suggest, the transmission during the interrupt-sensitive time period according to claim 8.

Additionally, the Chaum reference apparently discusses a "spoof proof" being transmitted from the roadside collection station RCS to the inter-vehicle unit IVU. However, there is no mention of any "spoof proof" being transmitted from the IVU to the smart card. Furthermore, figure 5 confirms that the "spoof proof" is not transmitted to the smart card. Therefore, it is respectfully submitted that the "spoof proof" of the Chaum reference does not disclose, or even suggest, an identifier generated from a first data word or a second data word being transmitted in a particular signal from a terminal to an intelligent storage device.

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Therefore, it is respectfully submitted that the Chaum reference does not disclose, or even suggest, transmitting to an intelligent storage device a particular signal including a posting triggering signal, a posting data record, an identifier generated using the first data word and a second data word of the at least one data word generated by one of the computer and the terminal. Accordingly, the Chaum reference does not anticipate claim 8.

Claims 9-17 depend from claim 8, accordingly, the Chaum reference does not anticipate any of claims 9-17, for at least the same reasons that the Chaum reference does not anticipate claim 8.

For at least the reasons discussed above, withdrawal of the rejection under 35 U.S.C. §102(b) with respect to claims 8-17 is hereby respectfully requested.

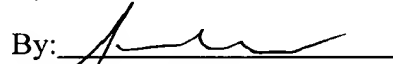
#### **CONCLUSION**

Applicants respectfully submit that all of the pending claims of the present application are now in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

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